

THE RHYSODINI (INSECTA: COLEOPTERA: CARABIDAE) OF CUBA

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ABSTRACT

The Cuban rhysodine fauna contains five species in two subtribes, two genera and three subgenera (possibly four, if *Clinidium humeridens* Chevrolat proves to belong to sensu stricto). Keys are given to all species including one member of subtribe Omoglymmiina, *Plesioglymmius* (*Ameroglymmius*) *compactus* Bell and Bell and four members of subtribe Clinidiina, *Clinidium* (*Protainoa*) *extrarium* Bell and Bell, *Clinidium* (*Tainoa*) *curvicosta* Chevrolat, and *Clinidium* (*Tainoa*) *chevrolati* Reitter. The subgenus of *Clinidium humeridens* Chevrolat is not known. The male of *Plesioglymmius compactus* Bell and Bell (synonymy, *Rhysodes cubanus* Zayas), formerly unknown, is described for the first time. A specific locality for *Clinidium extrarium* Bell and Bell, previously of unknown country of origin, is also given here for the first time.

RESUMEN

La entomofauna rhysodini de Cuba contiene cinco especies de dos subtribus, dos géneros y tres subgéneros (tal vez cuatro, si *Clinidium humeridens* Chevrolat prueba pertenecer a sensu stricto). Llaves son descritas para todas las especies, incluyendo un miembro de la subtribu Omoglymmiina, *Plesioglymmius* (*Ameroglymmius*) *compactus* Bell y Bell y cuatro miembros de la subtribu Clinidiina, *Clinidium* (*Protainoa*) *extrarium* Bell y Bell, *Clinidium* (*Tainoa*) *curvicosta* Chevrolat y *Clinidium* (*Tainoa*) *chevrolati* Reitter. El subgénero de *Clinidium humeridens* Chevrolat no es conocido. El macho de *Plesioglymmius compactus* Bell y Bell (Sinonimia, *Rhysodes cubanus* Zayas) previamente desconocido es descrito por primera vez. Un lugar específico de *Clinidium extrarium* Bell y Bell, previamente de país desconocido, también es reportado aquí por primera vez.

INTRODUCTION

This group of beetles comprising about 350 species, has highly modified adults and larvae which has made it difficult to place them in the classification. It is now generally agreed that they belong to suborder Adephaga. We interpret them to be highly modified Carabidae (Bell and Bell, 1962; Forsythe, 1972) although other workers still accord them separate family status.

Distinctive features of the adult include moniliform antennae, eyes either flattened to conform to the curvature of the head, or reduced; head with an anterior median lobe, paired temporal lobes and a condyle-like neck. The lobes are separated by deep pits and grooves; mandibles small and thin, not extending beyond the tip of the mentum; palpi retractile; pronotum with deep longitudinal median groove; prothorax with notopleural suture distinct, but sternopleural suture represented by interrupted groove or effaced; mesothorax elongate so body is pedunculate; elytral striae reduced in number, no more than six, often fewer; intervals often carinate. Abdomen appears to have five sterna, the suture between

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the second and third visible sternites completely effaced; Sterna IV–VI free, movable. Tibia of anterior leg with antenna cleaner in an emargination in medial margin; two curved teeth at apex; tibial spurs of all legs minute; male protarsi not modified; male meso- and metatibiae each with an anteriorly directed lobe or tooth, the calcar, at apex. Female with enlarged lateral pits on one or more of abdominal Segments III–V.

All species are similar in color. Newly emerged specimens are reddish brown; older ones become almost black.

Rhysodines can be found in fallen logs, erect dead trees, stumps, woody roots, under loose bark, and even in dead areas on living trees, including branches from the canopy. They are often in rather firm wood, which may require splitting with an axe or machete to expose them. They are rarely found, but if one is discovered, often more specimens can be located in the same piece of wood. They have been observed feeding on slime molds (Myxomycetes) (Bell and Bell, 1991).

A majority of Rhysodini are flightless with vestigial hind wings. Despite this, they have been particularly good at spreading to islands, where they have evolved many endemic species. All Cuban species are thought to be endemic. Each of the Greater Antilles, as well as several of the Lesser Antilles, have entirely endemic rhysodine faunas.

Recently, through the good offices of Dr. John Rawlins of Carnegie Museum of Natural History, and through the courtesy of the Cuban Academy of Sciences, we have been able to study the valuable rhysodine collection of the latter institution. While not all questions about the Cuban fauna are answered (particularly the status of *Clinidium humeridens* Chevrolat) we hope that this paper will make the future identification of Cuban rhysodines easier, and will stimulate local entomologists to fill the remaining gaps in our knowledge of the group.

Abbreviations used in the text are: ACCH, Academia de Ciencias de Cuba, Havana; BSL, Naturhistorisches Museum, Basel, Switzerland; CAS, California Academy of Sciences, San Francisco; MCZ, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts; MNHN, Museum National d'Histoire Naturelle, Paris, France; NMW, Naturhistorisches Museum Wien, Vienna, Austria.

MATERIALS AND METHODS

Some of the earlier work on Cuban rhysodids was done by observing and studying specimens in museums, namely the Museum of Comparative Zoology in Boston and the Museum National d'Histoire Naturelle in Paris. Later work was augmented by receiving specimens from museums in Basel, Vienna, and lastly Cuba. All specimens were studied under 500 \times magnification using a Wild stereomicroscope with reflected fiber optic illumination. Drawings were made with the aid of a camera lucida. The localities of specimens cited are listed as they appear on the labels and the current provinces have been added and appear in brackets.

GLOSSARY

Apical tubercle—A tubercle at the extreme apex of the elytra ending at the suture.

Calcar—A medial process on the ventral side of the meso- and metatibia of the male, the most convenient means of determining the sex of specimens.

Intercalary stria—A stria lateral to the parasutural stria, posteriorly becoming the medial boundary of the subapical tubercle at the apex of the elytra (Fig. 15).

Intratubercular stria—A stria lateral to the intercalary stria, posteriorly becoming the lateral boundary of the subapical tubercle and separating off the apical tubercle at the apex of the elytra (Fig. 15).

Minor setae—A group of many short setae on the antennal segments. On the more distal segments they can be grouped as a single row encircling a subapical ring (Fig. 1) or they can be grouped as an isolated tuft (Fig. 2).

Parasutural stria—A stria lateral to the sutural stria. In Clinidiina this can be abbreviated anteriorly (Fig. 15).

Stylet—A needle or chisel-like structure (ST) at the tip of antennal Segment XI (Fig. 1, 2).

Subapical tubercle—A tubercle anterior to the apical tubercle and separated from it by the intratubercular stria at the elytral apex.

SYSTEMATICS

Key to Subtribes, Genera, Subgenera, and Species of Adult Cuban Rhysodini

1. Each elytron with seven striae; minor setae forming complete ring near apex of antennal Segments V–X (Omoglymmiina) *Plesioglymmius* (*Ameroglymmius*) *compactus* Bell and Bell
- 1'. Each elytron with five or fewer striae; minor setae forming tufts on lower surface of some of the distal antennal segments (Clinidiina; *Clinidium*) 2
2. (1'.) Elytral humerus with a tooth *Clinidium* (s. str.?) *humidens* Chevrolat
- 2'. Elytral humerus not toothed 3
3. (2'.) Pronotum with prominent tooth at posterior angles, preceded by pollinose pit; no setae on pronotum; second interval of elytron not divided posteriorly; abdominal Sternum III (female) or III–V (male) with pit in midline *Clinidium* (*Protainoa*) *extrarium* Bell and Bell
- 3'. Pronotum without tooth at hind angle; pronotum with four to six marginal setae; second interval of elytron doubled posterior to middle; abdominal Sterna III–V without median pits 4
4. (3'.) Calcars present (males) 5
- 4'. Calcars absent (females) 6
5. (4.) Hind calcar with dorsal margin slightly sinuate, largest seta of hind calcar small, scarcely longer than width of calcar *Clinidium* (*Tainoa*) *curvicosta* Chevrolat
- 5'. Hind calcar with dorsal margin strongly angulate, largest seta more than three times as long as width of calcar *Clinidium* (*Tainoa*) *chevrolati* Reitter
6. (4'.) Sternum VI in female similar to that of male, sloped gradually in profile view, neither impressed nor tuberculate *Clinidium* (*Tainoa*) *curvicosta* Chevrolat
- 6'. Sternum VI strongly impressed posteriorly, anterior margin of impression forming median tubercle; in lateral view tubercle forms sharp angle *Clinidium* (*Tainoa*) *chevrolati* Reitter

Species Descriptions

Plesioglymmius (*Ameroglymmius*) *compactus* Bell and Bell, 1979

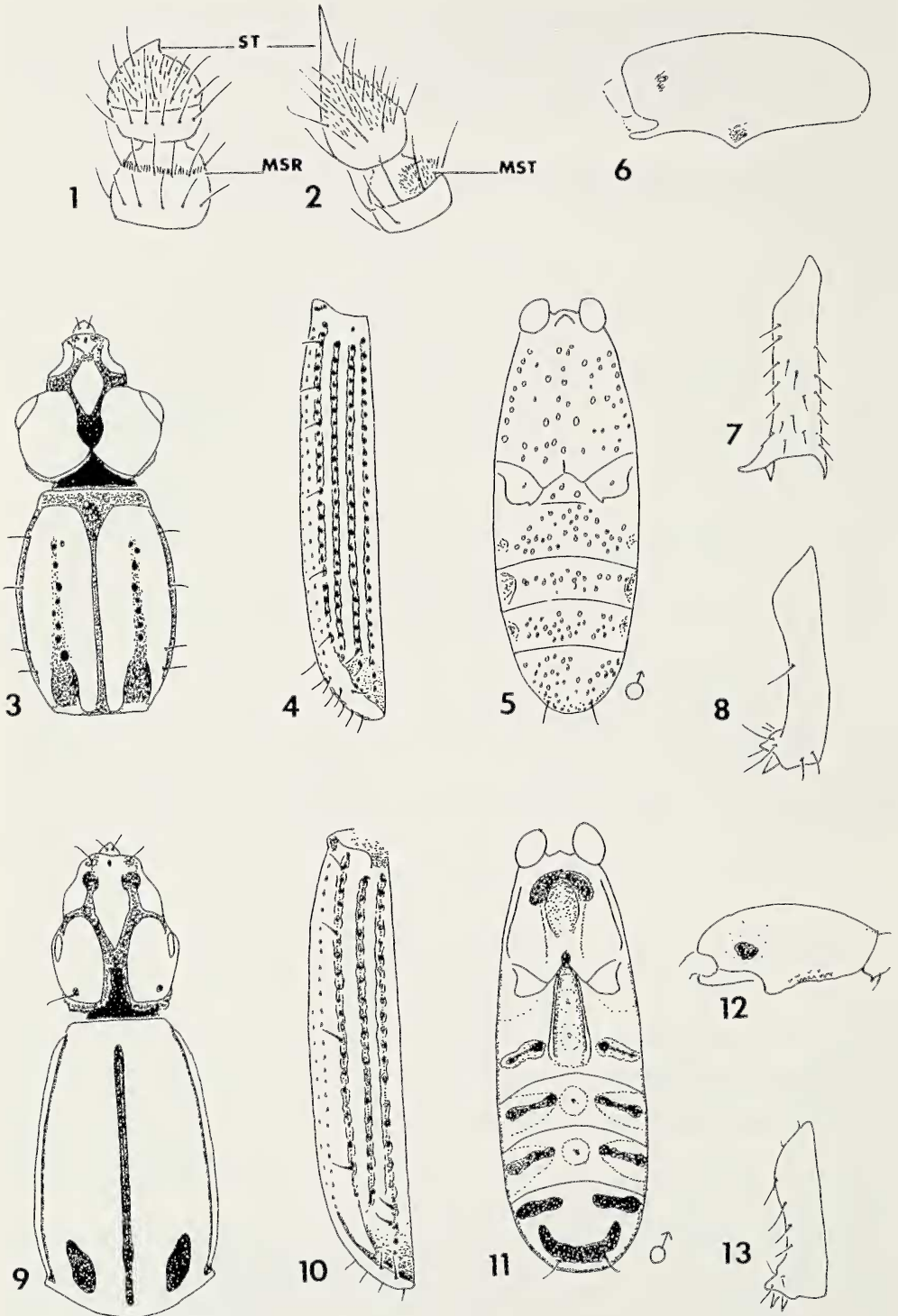
Plesioglymmius (*Ameroglymmius*) *compactus* Bell and Bell, 1979:437.

Type Specimen.—Holotype, female, labelled "CUBA": (MCZ).

Rhysodes cubanus Zayas, 1988:9, synonymized by Ivie (1991).

Type Specimen.—Holotype, female, stated to be from the altiplano de Mayari, Oriente Province [now Holguín Province] (in personal collection of heirs of Fernando de Zayas). We have not seen this type specimen.

Diagnosis.—The only member of the genus to have marginal setae on the pronotum. A single line of punctures in the paramedian groove of the pronotum is also unique. Among known Cuban Rhysodini, it is easily recognized by the presence of seven very coarsely punctate striae in each elytron and by relatively



large eyes which are oval in outline and are visible in dorsal view. This species is separated from its closest known relative *P. (A.) reichardti* Bell and Bell of northern South America by having the median lobe of the head obtusely pointed, rather than truncate.

Description.—Length 4.8–4.9 mm, pronotum with three to four marginal setae on each side (Fig. 3); elytral Stria II with two setae near apex; Stria IV with six setae extending from near base to near apex; about seven setae in apical half of marginal stria; one seta in apex of Stria VII on apical tubercle (Fig. 4).

Male with ventral profemoral tooth (Fig. 6); female lacking tooth; female with deep lateral pit present on Sternum IV; one pair of setae on Sternum VI in both sexes (Fig. 5) (two pairs in male of *P. reichardti*); calcar of mesotibia acute, with tip slightly upcurved (Fig. 7); calcar of metatibia small, with apex dorsal to level of spur, with a dorsal hump and an elongate, proximally directed seta (Fig. 8).

Additional Locality.—The secondary sexual characters of the male described here for the first time are based on a specimen labelled "Mte. Iberia, Ote. [now Guantánamo Province], L. Armas, III, 72; *Rhysodes cubanus* Zayas, det. Zayas" (ACCH).

Distribution.—Mountains of Holguín and Guantánamo Provinces.

Clinidium (Protainoa) extrarium
Bell and Bell 1978

Clinidium (Protainoa) extrarium Bell and Bell, 1978:63–64.

Clinidium (Mexiclinidium) extrarium (Bell and Bell 1978); Bell and Bell 1987:195.

Clinidium (Protainoa) extrarium (Bell and Bell 1978) Bell and Bell 1995 (returned to original subgenus).

Synonymy.—Restudy of this species has convinced us that its removal to *Mexiclinidium* was incorrect. The distinction between *Protainoa* and *Mexiclinidium* needs to be altered, since the discovery of *Clinidium (Mexiclinidium) reyesi* Bell and Bell 1987, which has an antennal tuft on antennal segment VI, in common with *Protainoa* and *Tainoa*. *Protainoa* resembles *Tainoa* in the shape of the pronotum, which is elongate, length/greatest width 1.58–1.76, widest well behind middle; anterior portion long and narrow; pronotum with one marginal groove which is effaced posteriorly; intercalary stria of elytron anastomosing with intratubercular stria posteriorly (third stria in *Protainoa*, apparent second stria in *Tainoa* because of abbreviation of parasutural stria); pronotum entirely without setae, but with prominent tooth at hind angle.

Mexiclinidium by contrast, has pronotum shorter, length/greatest width 1.54 or less; pronotum not conspicuously narrowed anteriorly; pronotum with two marginal grooves (except for *Clinidium (Mexiclinidium) halfpteri*); intercalary stria ending blindly posteriorly (except for *C. halfpteri*); pronotum with angular but without lateral setae; hind angle without prominent tooth.

Fig. 1–13.—Fig. 1. Antennal Segments X–XI; ST, stylet; MSR, minor setae, ring. Fig. 2. Antennal Segments X–XI; ST, stylet; MST, minor setae, tuft. Fig. 3–8. *Plesioglymmius (Ameroglymmius) compactus*. Fig. 3. Head, pronotum, dorsal view. Fig. 4. Left elytron, dorsal view. Fig. 5. Metasternum, abdomen, male, ventral view. Fig. 6. Profemur, male, lateral view. Fig. 7. Mesotibia, male, lateral view. Fig. 8. Metatibia, male, lateral view. Fig. 9–13. *Clinidium (Protainoa) extrarium*. Fig. 9. Head, pronotum, dorsal view. Fig. 10. Left elytron, dorsal view. Fig. 11. Metasternum, abdomen, male, ventral view. Fig. 12. Profemur, male, lateral view. Fig. 13. Metatibia, male, lateral view.

Type Specimen.—Holotype, male, labelled "Am. Bor. Rhysodes, N. Amerika" (BSL). Paratype female, same data (BSL).

Diagnosis.—This, the only species of subgenus *Protainoa*, is distinguished by having the cleaning organ of the anterior tibia entirely proximal to the basal articulation of the tarsus, tufts of minor setae present on antennal Segments VI–X, parasutural striae complete, reaching base of elytron, lacking pronotal setae and having a denticulate posterolateral pronotal angle.

Description.—Length 6.1–6.3 mm, body elongate; eye small, narrow, crescentic, much longer than deep; one isolated posterior temporal seta; pronotum elongate, widest near base, strongly tapered anteriorly; marginal groove ends posteriorly at pollinose pit immediately anterior to small denticle; basal impressions small, closed posteriorly (Fig. 9).

Elytral Striae I–III impressed, coarsely punctate; Stria IV not impressed; Stria V represented by row of fine punctures in basal quarter; effaced at middle, coarsely punctate and impressed in apical third; two setae near apex of Stria I, four setae evenly spaced along Stria III, two setae in impressed apical portion of Stria IV; about seven setae in impressed apical part of Stria V (Fig. 10); metasternum with broad, deep median cavity but not well-defined sulcus; abdominal Sternum III (female) or III–V (male) with median pits; abdominal sterna also with transverse sulci lateral to median pits (Fig. 11); those of Sternum IV of female dilated to form large pits; ventral surface of profemur asperate in both sexes, that of male forming tooth at distal end; male with ventral tooth on anterior trochanter (Fig. 12); meso-metafemur finely asperate ventrally in male, smooth in female; calcar small, triangular (Fig. 13).

Additional Locality.—The male characters described here were taken from a specimen labelled "Lomas de Soroa, Pinar del Rio, Cuba, 21-VIII-1970, L. Armas col" (ACCH). This specimen is important in revealing the homeland of a phylogenetically isolated species. This is the first record of a rhysodine from western Cuba.

Clinidium (Tainoa) (curvicosta) Chevrolat 1873

Clinidium (Tainoa) curvicosta Chevrolat, 1873:215.

Type Specimen.—We have been unable to locate authentic type material for this species. According to the original description, the species was collected in Cuba by F. Poey. There is a specimen in the Museum of Natural History in Vienna, which is labelled as the type. Vulcano and Pereira (1975) illustrated the elytron of this specimen, which is not the species under consideration here. It can not be the true type, as the original description states clearly that the second interval is doubled posteriorly ("*intermedia versum medium postice duplicate*").

The differences between the species which we, following Grouvelle (1903) and other earlier workers, have interpreted as *C. curvicosta* and the closely related *C. chevrolati* Reitter, are entirely secondary sexual characters, visible only on the legs and ventral surface, and are not mentioned in the original description. Therefore the name *curvicosta* could apply equally well to the present species or to the one subsequently named *C. chevrolati*. Until an authentic type is located, it seems best to continue using the Chevrolat name for the present species.

Diagnosis.—This species is recognized as subgenus *Tainoa* by the incomplete parasutural stria. In the male of this species, the largest seta of the hind calcar is small, scarcely longer than the width of the calcar. In the female, Sternum VI is not impressed, but gradually sloping posteriorly.

Description. —Length 4.3–6.8 mm, temporal lobe usually with three setae; pronotum elongate, widest posterior to middle; basal impression small, pointed anteriorly, closed posteriorly (Fig. 14); elytra elongate (Fig. 15); sutural and parasutural striae (PS) impressed; parasutural stria abbreviated, present only in apical half of elytron in the apparent second interval; intercalary stria (IC) a row of punctures except near apex, where impressed; intratubercular stria (IT) shallowly impressed, coarsely punctate; impressed at apical tubercle; sutural stria with four to six setae; parasutural stria lacking setae; intercalary stria with seven to eight setae evenly spaced; intratubercular stria with three to five setae in apical quarter; marginal stria with 10–12 setae; metasternum neither sulcate nor impressed (Fig. 16); abdominal Sterna III–V each with a pair of transverse grooves, the latter widely separated from one another, with medial ends foveate; Sternum VI with three pairs of pilose pits, inner anterior pits small, round, in some specimens lacking, posterior pair longitudinal, anterolateral pits round. Anterior trochanter of male dentate; male with hind calcar scarcely longer than width of calcar; female with enlarged lateral pit on Sternum IV; Sternum VI of both sexes sloped gradually posteriorly (Fig. 20).

Additional Localities. —Loma del Gato, Cobre Range above 3000 ft [Santiago de Cuba Province], July 3–7, 1936, P. J. Darlington; mts. north of Imías, 3000–4000 ft [Guantánamo Province], July 25–28, 1936, P. J. Darlington (MCZ). P. Boniato, [Santiago de Cuba Province], (three males, two females) XI-71, L. Armas; Baracoa, Monte Iberia [Guantánamo Province] (one male, two females), III-1972, L. Armas; same locality (one female) VII-1970; San Carlos Estancia, Guantánamo [Guantánamo Province], Cuba, (one male, one female) 4–8-X-1913; Nubujon, Baracoa [Guantánamo Province] (one female) 6-III-1979, L. B. Zayas (ACCH).

Distribution. —Massifs of S.E. Cuba, from Sierra Maestra to the Altura de Baracoa.

Clinidium (Tainoa) chevrolati Reitter 1880

Clinidium chevrolati Reitter 1880.

Clinidium turquinense Bell 1970.

Clinidium (Tainoa) chevrolati (Reitter) Bell and Bell 1978.

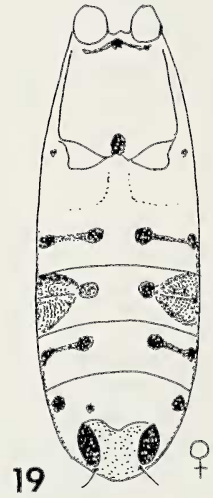
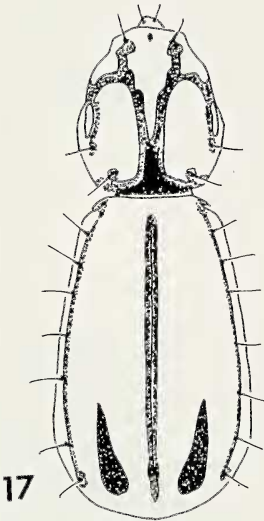
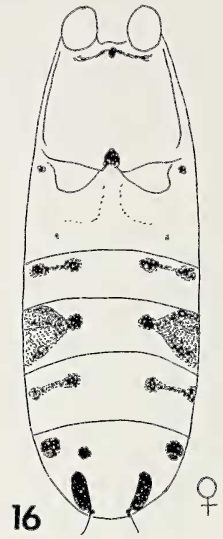
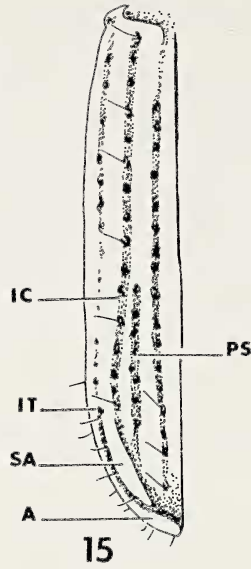
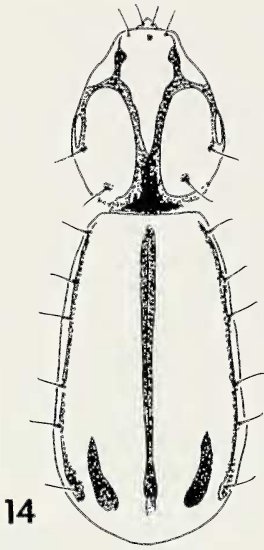
Clinidium chevrolati Reitter 1880:30–31.

Type Specimen. —Holotype female, labelled “Neu Granada, type *Cl. granatense*, *chevrolati* Reitter” (NMW). It is not clear how this specimen came to be labelled as the type for two dissimilar species. *Clinidium* (s. str.) *granatense* Chevrolat is also represented in the Vienna collection by two specimens labelled as types, as well as by one in MNHN in Paris, all representing a single species. We have designated the latter as lectotype of *granatense* (Bell and Bell, 1985). All three correspond to the description of *C. granatense* Chevrolat, so the designation of the *C. chevrolati* type as type for *C. granatense* is clearly an error. The locality of “Neu Granada” is obviously wrong.

Clinidium turquinense Bell 1970 synonymized by Bell and Bell (1978)

Type Specimen. —Holotype male, labelled “Pico Turquino” [Santiago de Cuba Province], 3000–5000 feet, June, 1936, coll. P. J. Darlington (MCZ 31752); paratype, one female with head and prothorax missing, same data (MCZ).

Diagnosis. —Very similar to *C. curvicosta* except that the body is more robust and pronotum less elongate. In the male, the largest seta of the hind calcar is very



long. In the female, Sternum VI is deeply impressed in posterior half, impression preceded by a median tubercle.

Description.—Length 5.0–7.0 mm, very similar to *C. curvicosta* although usually larger, more robust, pronotum less elongate (Fig. 17, 18); differs strikingly in secondary sexual characters: hind calcar of male very stout, strongly angulate on proximal margin, with very long curved seta, three times the width of the calcar (Fig. 22); female with Sternum VI deeply impressed in posterior half, impression preceded by median tubercle (Fig. 19, 21).

Additional Localities.—One female, labelled “Pico Turquino, 5-II-72, coll. Novoa”; one male, four females, same locality, 5-III-72, col. Broche; one female, same locality, 3-III-73, Broche; two females, same locality, 5-III-72, col. Alayo; two males, Nibujon, Baracoa [Guantánamo Province], 6-III-1979, L. B. Zayas; one male, Palma Mocha, Sierra Maestra, Julio 10–20 de 1922, col. C. H. Ballou y S. L. Bruner (all ACCH); five specimens labelled “Sierra de Maestra” (CAS).

Distribution.—Mountains of E. Cuba. Most localities are in the Sierra Maestra, allopatric to *curvicosta*. The specimen from Nibujon, however, is from the east, and from a locality from which *curvicosta* was also collected.

Clinidium humeridens Chevrolat 1873

Clinidium humeridens Chevrolat, 1873:215–216.

Type specimen.—We have been unable to locate the holotype of this species. The original description suggests that it belongs in *Clinidium* sensu stricto.

Original Description.—“Elongatum, nigrum nitidum. Caput ovale, postice subtruncatum, vertice canaliculatum, costula antica et oblonga signatum. Antennae moniliformes, pilosae, articulo ultimo brevissime acuto. Oculi parvi transversim oblongi. Prothorax elongatus oblongus nitidus, medio canaliculatus, foveis duabus basalibus obliquis et oblongis, margine laterali infra vix distincte sulcata. Elytra subparallela, conjunctim rotundata, sulcis quatuor; stria externa versus medium interrupta, carinis quatuor, humerali elevata apice recurva, spina humerali antice projecta. Pedes nitidi; femoribus sat crassis; tibiis anticis infra versus apicem emarginatis, unispinosis, apice bimucronatis. Longit. 6.5 mm, lat. 1.5 mm.”

English Translation of Original Description.—Elongate, shining black. Head oval, posteriorly subtruncate; vertex channeled (or ribbed) anteriorly, like an oblong shield. Antennae moniliform, pilose, last segment briefly acute. Eyes small, transverse, oblong. Prothorax elongate, oblong, shining, grooved medially, two basal foveae, oblique and oblong, lateral margin below scarcely distinctly sulcate. Elytra subparallel, rounded together, four grooves; external stria interrupted towards the middle; four carinae; humerus elevated, recurved at apex, humeral spine projecting anteriorly. Legs shining, femora rather thick; anterior tibia emarginate, unispinose towards apex; apex bimicronate. Length 6.5 mm, width 1.5 mm.

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Fig. 14–23.—Fig. 14–16. *Clinidium (Tainoa) curvicosta*. Fig. 14. Head, pronotum, dorsal view. Fig. 15. Left elytron, dorsal view; A, apical tubercle; SA, subapical tubercle; IC, intercalary stria; IT, intratubercular stria; PS, parasutural stria. Fig. 16. Metasternum, abdomen, female, ventral view. Fig. 17–19. *Clinidium (Tainoa) chevrolati*. Fig. 17. Head, pronotum, dorsal view. Fig. 18. Left elytron, dorsal view. Fig. 19. Metasternum, abdomen, female, ventral view. Fig. 20, 21. Abdominal Sterna VI, lateral view, female. Fig. 20. *C. curvicosta*. Fig. 21. *C. chevrolati*. Fig. 22, 23. Metatibia, male, lateral view. Fig. 22. *C. chevrolati*. Fig. 23. *C. curvicosta*.

Reitter (1880) refers to *C. humeridens* when describing *C. chevrolati*. He states that *chevrolati* differs from *humeridens* in "the pronotum being more narrowed anteriorly, in the sculpture of the elytra and in the small humeral tooth of the latter species being absent."

There seems no reason to doubt the original locality, "Cuba," because the type was sent to Chevrolat by Felipe Poey. The species should be easily recognizable by the dentate elytral humerus, a feature not known for any other rhysodine. This interesting beetle awaits rediscovery by Cuban entomologists.

DISCUSSION

Rhysodines are especially well represented among beetles which have reached islands. They are thought to travel in floating logs. Although 75% of species have fully developed hind wings, there are very few flight records. Flightless taxa are as likely to reach islands as are fully winged ones, so flight is believed to be unimportant in crossing water gaps.

Rhysodini in the Greater Antilles represent three groups, *Clinidium* subgenera *Protainoa* and *Tainoa*, which are sister groups; *Clinidium* s. str. and *Plesioglymmius* subgenus *Ameroglymmius*.

The *Protainoa*-*Tainoa* assemblage are endemic to the Greater Antilles, with species in Cuba, Hispaniola and Jamaica. They are absent from Puerto Rico. The closest relatives are in the subgenus *Mexiclinidium* of Mexico and Guatemala. Subgenus *Clinidium* s. str. are represented by numerous species in the northern Andean region of South America, Central America north to Guatemala, and a few in the Lesser Antilles. The species from Hispaniola and Jamaica are closely related, forming the *jamaicense* group. *Clinidium humeridens* of Cuba, of which the type has not been found, might also belong to the *jamaicense* group, according to the meager description. The two Puerto Rican species, however, do not belong to this group, and do not appear to be related to one another, each perhaps belonging to a different group of Andean species. Thus, the surprising distinctness of the Puerto Rican fauna extends across two subgenera and suggests a different history for Puerto Rico. The genus *Clinidium* as a whole is holarctic. Although *Clinidium* s. str. could have originated in the Andean region, it does not penetrate South America beyond the Amazon region, where it makes contact with an entirely different Gondwanian fauna with the genera *Rhyzodiastes* and *Neodhysores*.

Genus *Plesioglymmius* subgenus *Ameroglymmius* contains fully winged species. *Plesioglymmius compactus* is endemic to Cuba. Two other members of the subgenus are known, both from South America. *Plesioglymmius* belongs to subtribe Omoglymmiina, a primarily Laurasian taxon. There are two other subgenera, both found in the Oriental Realm. *Plesioglymmius* is probably a Laurasian taxon requiring a tropical climate, which now has become limited to relict areas because of the cooling of the climate in the later Cenozoic.

In summary, the Cuban rhysodine fauna shows a strong affinity with Hispaniola and Jamaica; a more distant resemblance to Mexico, Central America, and the northern Andes, but no evidence of any connection with Florida. The zoogeography of the Rhysodini has been discussed in greater detail in Bell (1979).

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